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(54) PRODUCTION OF ELECTRO CONDUCTIVE COATING MATERIAL

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a coating material capable of forming a protective layer for an electrophotographic photoreceptor and excellent in optical homogeneity by using a polysiloxane resin containing bonded fine silica and prepared by hydrolytically condensing a silane compound having a specified structure in the presence of a specified amount of fine silica and giving an electroconductive coating film having a specified volume resistivity when cured by heating.

SOLUTION: A silane compound of formula I: $R_2Si(OR)_3$ is hydrolytically condensed in a mixed solvent of an alcohol with water in an amount equal to or larger than that necessary for the reaction in the presence of 1-200 pts.wt. fine silica per 100 pts.wt. polysiloxane resin component to be obtained to form a polysiloxane resin represented by formula II: $R_1SiO_{3/2}$, containing bound fine silica and giving a conductive coating film having a volume resistivity of 1×10^9 to $1 \times 10^{14} \Omega cm$ when cured by heating. In formulas I and II, R1 and R2 are each an epoxy-containing organic group (A), a 1-18 C saturated hydrocarbon group or a 6-18 C aromatic hydrocarbon group, provided at least part of them are As; and R3 is a 1-8 C linear saturated hydrocarbon group.

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